

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-023666**Date Inspected:** 25-Mar-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai China

CWI Name:	Testino	CWI Present:	Yes	No
Inspected CWI report:	Yes No N/A	Rod Oven in Use:	Yes No N/A	
Electrode to specification:	Yes No N/A	Weld Procedures Followed:	Yes No N/A	
Qualified Welders:	Yes No N/A	Verified Joint Fit-up:	Yes No N/A	
Approved Drawings:	Yes No N/A	Approved WPS:	Yes No N/A	
		Delayed / Cancelled:	Yes No N/A	
Bridge No:	34-0006	Component:	OBG Structure	

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector ,Mr. Manuel Teall was present during the times noted above for observations relative to the work being performed at ZPMC.

BAY 14 –

VISUAL INSPECTION

This QA Inspector Manuel Teall performed a witness inspection on PWHT for OBG APBB1-Bearing Blocks 088-9,088-15,108-2,108-13,122-1,094-2,121-13 .The Blocks are located at the ZPMC Heat Treatment Facility . Their was an IR issued on this NWIT #08618

Incident Report

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

Description of Incident During the Quality Assurance Witness Inspection NWIT 08618 for the PWHT of APBB1 Bearing Block's 088-9,088-15,108-2,108-13,122-1,094-2,121-13 located in The ZPMC Heat Treatment Facility this Quality Assurance Inspector (QA) Manuel Teall discovered the following issues:

1) - This QA visually observed the PWHT of the APBB1-Cast Bearing Blocks not meeting the requirements of TC-RFI-0290R3. The heat rate shall be no less than 55 degrees Celsius per hour and no greater than 64 degrees Celsius per hour above 315 degrees Celsius. The QA Inspector Witnessed the heat charts reading at 43 degrees Celsius per hour for the first hour after the temperature reached its destination point of 315 degrees Celsius. The charts read 67 degrees Celsius for the second hour of ramp up temperature .See pictures below

2) -. This CT QA Inspector visually observed the PWHT of the APBB1-Cast Bearing Blocks not meeting the requirements of TC-RFI-0290R3. Bearing Blocks shall remain at 610 degrees Celsius +35 degrees Celsius +/-10 degrees Celsius for duration of one hour per 25mm depth of weld repair. For example 12.5 depths would require 30 minutes of hold time. The depth of the largest weld repair on the APBB1 Bearing Blocks being stress relieved was 15mm in depth. The QA inspector arrived at ZPMC heat treatment facility to witness the hold time when he arrived the temperature on the graph read 617 degrees Celsius the time was 16:21 the QA inspector rechecked the graph for the second time of the hold time at 16:41 at this time the graph read 617 degrees Celsius but the time line had not changed locations ,The QA inspector then informed ZPMC QA Inspector that the graph was having problems and that the time line was in a fixed position .When ZPMC QA arrived at the ZPMC Heat Treatment Facility the graph read 617 degrees Celsius the time was 16:48 and the graph indicated that the hold time was around 5 minutes when the actual hold time that QA witnessed was actually 27 minutes . The ZPMC QA inspector had the heat facility continue the hold time temperature 617 degrees shown on the chart. The CT QA inspector then documented a third evaluation of the temperature and time. The time was 17:10 the temperature read 617 degrees Celsius the actual hold time that was witnessed from the time of CT QA Inspector was now at 49 minutes while the chart read around 30 minutes. The CT QA Inspector rechecked the temperature for the fourth time the temperature read 617 degrees Celsius the time was 17:16 the actual hold time since the arrival of the CT QA Inspector was 55 minutes, The graph showed that the temperature was 617 degrees Celsius the graphs indicated hold time was around 32 minutes. At 17:16 Is when ZPMC started the cool down process. The actual hold time is unknown there is no way of telling how long the reader pen was stuck in the stationary position before The CT QA Inspector arrived at the Heat treatment Facility . See pictures below.

VISUAL INSPECTION

MAGNETIC PARTICLE TESTING (MT)

This QA inspector performed Magnetic Particle Testing (MT) of approximately 15% of an area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA Inspector generated an MT report for this date. The member is identified as OBG segment 14E. The welds designations reviewed are as follows:APBB1- 088-9.088-15,108-2,108-13,122-1,094-2,121-13

This QA Inspector Manuel Teall performed a random visual inspection on OBG APBB1-Bearing Blocks .the blocks are located in Bay 14 And in the paint bay .All visual defects were marked and ZPMC QC was notified .

On this date Caltrans OSM Quality Assurance (QA) Inspector ,Mr. Manuel Teall was present during the times noted above for observations relative to the work being performed at ZPMC.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Summary of Conversations:

No relevant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150-0042-2372, who represents the Office of Structural Materials for your project.

Inspected By:	Teall,Manuel	Quality Assurance Inspector
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Reviewed By:	McClendon,Timothy	QA Reviewer
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